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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,649	03/09/2001	Akira Yoda	2091-0234P	3948

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EXAMINER	
THOMPSON, JAMES A	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/801,649	YODA, AKIRA	
	Examiner	Art Unit	
	James A. Thompson	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 09 March 2000. It is noted, however, that applicant has not filed a certified copy of the 065276/2000 application as required by 35 U.S.C. 119(b). Currently, there is no such foreign priority document in the case file.

Response to Arguments

2. Applicant's arguments, see page 10, lines 8-21, filed 27 January 2005, with respect to the declaration have been fully considered and are persuasive. The objection to the declaration listed in item 2 of the previous office action, dated 27 September 2004, has been withdrawn.

3. Applicant's arguments filed 27 January 2005 have been fully considered but they are not persuasive.

Regarding page 11, line 1 to page 12, line 9: As Examiner explained on page 3, lines 11-19 of said previous office action, an N-bit identification word is embedded with the image data. Since the identification word can be retrieved regardless of whether operations such as scaling, cutting or registering are performed on the image, said identification word is clearly inseparable from the original picture. There is nothing in the claim language that requires that the identification information be encoded, only that the identification information be inseparable from the original picture, as has been demonstrated in Rhoads (US Patent 5,850,481). Applicant is respectfully

reminded that, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding page 12, line 10 to page 13, line 11: Examiner respectfully directs Applicant to the portion cited by Examiner in the office action, namely column 19, lines 6-12 of Rhoads. "Suspect" image data is the wording used by *Rhoads*, which Examiner interprets to clearly mean the initial input image data. The word "suspect" does not appear anywhere in the independent claims, nor is there any limitation in the independent claims that requires that the input image data be encoded. "Initial" image data is the specific phrasing used in the independent claims.

Regarding page 13, lines 12-15: The new claims have been fully considered by Examiner. The rejections of the claims based on the prior art are given in detail below.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 16 and 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Rhoads (US Patent 5,850,481).

Regarding claim 16: Rhoads discloses receiving a composition input data, wherein the composition input data includes an input image data, wherein the input image data

includes at least a portion of an original picture data (column 17, lines 31-35 of Rhoads) with ID information corresponding to the original picture data embedded therein (column 19, lines 6-10 of Rhoads); extracting the ID information from the input image data (column 16, lines 6-10 and column 19, lines 6-12 of Rhoads); retrieving from storage an original image data corresponding to the ID information, wherein the original image data includes the original picture data with the related ID information embedded therein (column 22, lines 21-30 of Rhoads); and composing an output image data such that the input image data of the composition input data is replaced with a matching portion of the original image data (column 7, lines 35-39 and column 19, lines 14-17 of Rhoads).

Regarding claim 20: Rhoads discloses that the ID information is embedded in the original image data (column 22, lines 21-26 of Rhoads) and the input image data (column 19, lines 21-26 of Rhoads) in one or more subplanes (figure 13 and column 35, lines 4-9 of Rhoads), wherein a dimension of the original image data is mxn pixels (figure 13(700) of Rhoads), and wherein each subplane is composed of pxq pixels, $p<m$ and $q<n$ (figure 13(704); figure 16; and column 42, lines 40-46 of Rhoads), and the subplanes are spaced apart a predetermined number of pixels from each other (figure 16 and column 42, lines 40-43 of Rhoads). The ID information shown in figure 16 of Rhoads is clearly an area of pxq pixels where $p<m$ and $q<n$ for an mxn image. The fact that the ID information is "wallpapered" in the background demonstrates that the subplanes if the ID information are spaced apart a predetermined number of pixels from each other.

Regarding claim 21: Rhoads discloses that a bit value of the ID information is encoded in the subplanes (figure 17 and column 43, lines 25-33 of Rhoads).

Regarding claim 22: Rhoads discloses that the ID information is modulated on color channels of the original picture data (column 35, lines 4-8 and lines 25-30 of Rhoads).

Regarding claim 23: Rhoads discloses that the ID information (figure 17(826) of Rhoads) is modulated onto lower bits of the color channels (column 43, lines 25-33 of Rhoads). As can clearly be seen in figure 17 of Rhoads, the "shadow channel" containing the ID information is in the lower bits of the color channel.

Regarding claim 24: Rhoads discloses that the color channels are R, G and B (column 56, lines 55-57 of Rhoads).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads (US Patent 5,850,481) in view of Kenner (US Patent 5,956,716).

Claims 1-5 recite an image output method. Claims 6-10 recite an image output apparatus. Claims 11-15 recite a computer-readable recording medium storing a program to cause a

computer to execute a method. The image output apparatus of claims 6-10 perform the image output method of claims 1-5 and the steps of the computer program of claims 11-15. Claims 1-5, claims 6-10, and claims 11-15 are therefore respectively discussed together.

Regarding claims 1, 6 and 11: Rhoads discloses an image output apparatus (figure 6 of Rhoads) comprising reading means (figure 6(218) of Rhoads) for obtaining initial image data (column 17, lines 58-63 of Rhoads) representing an initial (suspect) image recorded in an original image (column 19, lines 6-12 of Rhoads) and ID information for identifying an original picture by reading the original image (column 16, lines 6-10 of Rhoads) having the original picture and the ID information inseparable from the original picture (column 12, lines 10-16 of Rhoads). In order to obtain the image with the embedded N-bit identification word (column 16, lines 6-10 of Rhoads), it is inherent that said image is read. Otherwise, there would be no image data from which to determine said N-bit identification word. Since the embedded identification number can be retrieved independent of whether operations such as scaling, cutting, and registering are performed on the image (column 12, lines 10-16 of Rhoads), then said identification information is clearly inseparable from the original picture.

Said apparatus further comprises storage means (figure 6(214) of Rhoads) for storing a plurality of sets of original picture data samples in relation to ID information (column 22, lines 21-22 and lines 25-30 of Rhoads).

Said apparatus further comprises reading means for reading equivalent original picture data representing an equivalent original picture (column 18, lines 64-67 and column 19, lines

14-15 of Rhoads) corresponding to the ID information of the original picture from the storage means (column 22, lines 21-22 and lines 25-30 of Rhoads). Since data samples of the original picture data are stored in memory (column 22, lines 21-22 and lines 25-30 of Rhoads) and used in a matching process with the suspect image (column 18, lines 64-67 and column 19, lines 14-15 of Rhoads), a reading means for reading said stored original data is inherent in the device. Otherwise, said stored original data would not be available for use in said matching process.

Said apparatus further comprises processing means (figure 6(202); and column 17, lines 46-48 and lines 53-55 of Rhoads) for obtaining processed image data by comparing the initial image data with the equivalent original picture data (column 18, line 64 to column 19, line 2 of Rhoads) and carrying out processing on the equivalent original picture data to cause the equivalent original picture data to geometrically agree with the original picture in the initial image (column 19, lines 14-17 and column 7, lines 35-39 of Rhoads).

Said apparatus further comprises output means (figure 6(234) and column 18, lines 43-44 of Rhoads) for obtaining a print by printing the processed image data (column 18, lines 53-55 of Rhoads).

Rhoads does not disclose expressly that said storage means stores, in relation to ID information, the entire original picture of each of said plurality of sets of original picture data.

Kenner discloses storing the entire clip of video data along with its related identification (video ID) information for each of a plurality of video data clips (column 28, lines 46-54 of Kenner).

Rhoads and Kenner are combinable because they are from similar problem solving areas, namely the prevention of unauthorized data copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to store all of the data, along with the corresponding identification code, as taught by Kenner, said data being the image data taught by Rhoads. The motivation for doing so would have been to allow the original content provider to modify the content as desired (column 28, lines 40-45 of Kenner) and keep track of the different versions of the content (column 28, lines 12-15 of Kenner). Therefore, it would have been obvious to combine Kenner with Rhoads to obtain the invention as specified in claims 1, 6 and 11.

Regarding claims 2, 7 and 12: Rhoads discloses that the ID information is secretly embedded in the initial image (column 5, lines 38-41 of Rhoads). Since the ID information that is embedded in the initial image has the look of pure noise (column 5, lines 38-41 of Rhoads), the said ID information is clearly embedded secretly.

Regarding claims 3-4, 8-9, and 13-14: Rhoads discloses examining an image that potentially infringes upon a copyright (column 10, lines 48-52 of Rhoads) and comparing said infringing image with the original image (column 11, lines 55-64 of Rhoads) to determine if copyright infringement has indeed occurred (column 10, lines 53-55 of Rhoads).

Rhoads does not disclose expressly copying prevention processing means for carrying out processing to prevent copying on the processed image data and/or on the print.

Kenner discloses copying prevention processing means (figure 4(58) of Kenner) for carrying out processing (column 25,

lines 55-62 of Kenner) to prevent copying on the processed image data and/or on the print (column 25, lines 64-67 and column 26, lines 10-13 of Kenner).

Rhoads and Kenner are combinable because they are from similar problem solving areas, namely the prevention of unauthorized data copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a copying prevention means, as taught by Kenner, based on the embedded copy prevention data taught by Rhoads. The motivation for doing so would have been to deter unauthorized copying and better enable the authorities to track down copyright violators (column 26, lines 9-11 of Kenner). Therefore, it would have been obvious to combine Kenner with Rhoads to obtain the invention as specified in claims 3-4, 8-9, and 13-14.

Regarding claims 5/1-5/4, 10/6-10/9, and 15/11-15/14: Rhoads does not disclose expressly information management means for managing a copyright of the original picture based on the ID information.

Kenner discloses information management means (figure 4(90) of Kenner) for managing a copyright of the original picture based on the ID information (column 28, lines 46-52 of Kenner).

Rhoads and Kenner are combinable because they are from similar problem solving areas, namely the prevention of unauthorized data copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to manage the copyright information based on the ID information, as taught by Kenner. The motivation for doing so would have been to be able to properly manage the distribution of copyrighted data (column 28, lines 52-58 of Kenner). Therefore,

it would have been obvious to combine Kenner with Rhoads to obtain the invention as specified in claims 5/1-5/4, 10/6-10/9, and 15/11-15/14.

8. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads (US Patent 5,850,481) in view of Banton (US Patent 5,404,411).

Regarding claim 17: Rhoads discloses extracting the matching portion of the original image data corresponding to the input image data (column 19, lines 14-17 of Rhoads).

Rhoads does not disclose expressly replacing the input image data of the composition input data with the matching portion of the original image data.

Banton discloses replacing the input image data of the composition input data (column 7, lines 6-11 of Banton) with the matching portion of the original image data (column 6, lines 63 to column 7, line 4 of Banton).

Rhoads and Banton are combinable because they are from the same field of endeavor, namely the analysis of portions of digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to replace the matched noisy portion taught by Rhoads with the original image data, as taught by Banton. The motivation for doing so would have been to improve the final output print (column 2, lines 35-38 of Banton). Therefore, it would have been obvious to combine Banton with Rhoads to obtain the invention as specified in claim 17.

Regarding claim 18: Rhoads discloses pattern matching the original image data with the input image data (column 7, lines 35-39 and column 19, lines 14-17 of Rhoads).

Regarding claim 19: Rhoads discloses that the step of pattern matching includes one or more of scaling, rotating, cropping and translating (column 7, lines 35-39 and column 19, lines 14-17 of Rhoads).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

JAT
08 June 2005

THOMAS D. LEE
PRIMARY EXAMINER